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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LIN, KELVIN Y

ART UNIT PAPER NUMBER

2142

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,524

Applicant(s)

BOLIEK ET AL.

Examiner

Kelvin Lin

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Arguments

1. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Response to Amended Claims

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-9, 12-18, 21-28, 34, and 37 are rejected under 35 USC 103(a) as being unpatentable over Larsson et al., (U.S. PG Pub No. 2003/0110299) in view of Josephsen et al., (US Patent No. 6747762)
2. Regarding claim 1, Larsson teaches a client comprising:
 - a memory having an application and a data structure stored therein, wherein the data structure identifies positions of the compressed codestream on a server and identifies data of the compressed codestream already buffered at the client, if any (Larsson, [0002], 1.5-8),
 - a processor coupled to the memory to execute the application to generate a request for portions of the compressed codestream based on indications

of which portions of the codestream are already stored in the memory as indicated by the data structure (Larsson, [0052], I.1-5)

But, Larsson fails to teach the requested portion is determined based on resolution, quality, size or region.

However, Josephsen teaches:

- wherein size of the requested portions is determined based on at least two of resolution, quality, size, and region of an image specified by a user of the client (Josephsen, col.3, I.57-65).

It would have been obvious to one ordinary skilled in the art at the time the invention was made by incorporating the Josephsen's optimizing compression of scanned data based on the user's desire for file size, compression speed, or image quality.

The motivation would be that the combination of Josephsen's compression method with Larsson's partial retrieval of image in the compressed domain storage system, because they are both dealt with the bitmap compression method. Therefore, it will save lot of time without needs to a full decoding of the stream.

3. Regarding claim 2, Larsson further discloses the client defined in claim 1 wherein the processor creates a new codestream by integrating previously obtained portions of the compressed codestream within portions of the compressed codestream received as a result of the request, and the processor updates markers for the new codestream (Larsson, (00804, 1.1-8).

4. Regarding claim 3, Larsson further discloses a system comprising:

- A server to store a compressed codestream corresponding to image data (Larsson, [0063], 1.1-4) ; and
- a client coupled to the server via a network environment, wherein the client includes a memory having an application and a data structure stored therein, wherein the data structure identifies positions of the compressed codestream on the server and identifies data of the compressed codestream already buffered at the client, if any, and further wherein the client request bytes of the compressed codestream from the server that are not already stored in the memory and generates decoded image data requested (Larsson, [0052], 1.1-5), in which the client sends a request to the server for the desired part which is not in the client) by a user from the bytes of the compressed codestream requested from the server and any portion of the compressed codestream previously stored in the memory necessary to create the image data (Larsson, [0049]-[0054]), necessary to create the image data are part of the new codestream, the client to generate image data by decoding the new codestream, wherein size of the requested bytes is determined based on at least two of resolution, quality, size, and region of an image specified by a user of the client (Josephsen, col.3, 1.57-65)

5. Regarding claim 5, Larsson further discloses the system defined in claim 3 wherein, when executing the application, the client determines image

characteristics that a user requests (Larsson, Abstract), selects data of a compressed codestream that corresponds to the image characteristics, determines data of a compressed codestream that corresponds to the image characteristics that is not already buffered at the client, issues requests to the server to obtain the data of a compressed codestream that corresponds to the image characteristics that is not already buffered at the client, integrates data received from the server with any previously buffered data of the compressed codestream that corresponds to the image characteristics, decodes the data of the compressed codestream that corresponds to the image characteristics, and displays an image corresponding to the decoded compressed codestream. (Larsson, [0002], [0008], [0021], [0062]).

6. Regarding claim 6, Larsson further discloses the system defined in claim 3 wherein the server serves byte requests (Larsson, [0032], 1.1-3, [0060]).

7. Regarding claim 7, Larsson further discloses the system defined in claim 3 wherein the client further comprises a software decoder, and the client creates the compressed codestream for the software decoder by integrating bytes requested with previously obtained bytes (Larsson, [0021], 1.1-4, [0062], 1.1-13).

8. Regarding claim 8, Larsson further discloses the system defined in claim 3 wherein the client determines the location and length of each packet (Larsson, [0062], 1.7-12).

9. Regarding claim 9, Larsson further discloses the system defined in claim 8 wherein the client requests a header length of a compressed file from the server

that includes one or more file format boxes and a main header of the codestream box from which the client determines the location and length of each packet (Larsson, [0042], 1. 1-3, [0052], 1.1-5).

10. Regarding claim 12 has similar limitations as claim 6. Therefore, claim 12 is rejected for the same reasons set forth in the rejection of claim 6.

11. Regarding claim 13, Larsson further discloses the system defined in claim 3 wherein the compressed codestream comprises a JPEG 2000 codestream (Larsson, [0059], 1.1-12).

12. Claims 14-18 have similar limitations as claims 5-9. Therefore, Claims 14-18 are rejected for the same reasons set forth in the rejection of claims 5-9.

13. Claim 21 has similar limitations as claim 13. Therefore, Claim 21 is rejected for the same reasons set forth in the rejection of claims 13.

14. Claims 22-28 have similar limitations as claims 10-14, and 16-18. Therefore, Claims 22-26 are rejected for the same reasons set forth in the rejection of claims 10-14, and 16-18.

14. Claim 34 has similar limitations as claim 3. Therefore, Claim 34 is rejected for the same reasons set forth in the rejection of claims 3.

15. Claim 37 has similar limitations as claim 13. Therefore, Claim 37 is rejected for the same reasons set forth in the rejection of claims 13.

16. Claims 4, 30-33 are rejected under 35 USC 103(a) as being unpatentable over Larsson in view of Josephsen and further in view of Guedalia (U.S. Patent 6535878).

17. Regarding claims 4, 30 Larsson teaches the packet contains the requested

codestream in the packet, and coded data segment (Larsson , [0022]-[00454].

Although the above mentioned prior art teaches codestream data segment, which not including the tile parts.

However, Guedalia teaches the tile format (Guedalia, col.5, 1.42-43, col.6 , l . 1 8- 1 9) ;

18. Regarding claim 30, Guedalia further discloses a method comprising: providing information to enable a client to determine image size and a maximum number of resolutions (Guedalia, col. 5, 1.38-40), receiving a request for one or more tiles of a codestream of compressed data (Guedalia, col. 7, 1.5-8), wherein size of requested one or more tiles of the codestream is determined based on an image size and resolution determined by the client (Josephsen, col.3, l.57-65) and parsing the codestream of compressed data to locate packets related to the requested (Guedalia, col. 7, 1.1-3), including packets for a requested tile at a resolution less than or equal to the resolution requested and all layers (Guedalia, col. 5, 1.34-67).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include the teaching of Guedalia for multi-resolution tiled format for Internet application (Guedalia, col.6, 1.15-58).

The motivation would be for Larsson and Josephsen to implement partial image retrieval in the compressed domain using Guedalia multi-resolution format will enhance full resolution, while the background will have a reduced resolution which could improve in later stages if the method described above using the shifting is used (Larsson, [0070]).

19. Regarding claim 31, Guedalia further discloses the method defined in claim 30 wherein packets located as a result of parsing includes all packets for a requested tile at a resolution less than or equal to a resolution requested and all layers (Guedalia, col. 5, 1.34-67).

20. Regarding claim 32, Guedalia further discloses the method defined in claim 30, where the information comprises an HTML document (Guedalia, col. 5, 1.17-20).

21. Claim 33 has similar limitations as claim 32. Therefore, Claims 33 is rejected for the same reasons set forth in the rejection of claims 32.

22. Claims 36, and 38 have similar limitations as claim 35. Therefore, Claims 36, and 38 are rejected under Guedalia for the same reasons set forth in the rejection of claim 35.

23. Claims 10-11 , 19-20, 29, 35-36, 38 are rejected under 35 U.S.C 103(a) as being unpatentable over Larsson in view of Josephsen , and in view of Guedalia as applied to claims above, and further in view of Fukuhara et al., (US PG Pub No. 20010028404).

24. Regarding claims 10, and 11, Larsson as modified by Guedalia lacks combination with a TLM and PLM marker segments. Fukuhara teaches the TLM, and PLM maker segments on (Fukuhara, [0039]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Guedalia's JPEG with Fukuhara's JPEG2000, which provide the optimum encoding and decoding scheme: TLM, and PLM and improve the picture performance (Fukuhara, [0039]).

The motivation would be for Larsson to implement the JPEG 2000 signal encoding with TLM and PLM will enhance the full resolution.

25. Claims 19-20 have similar limitations as claims 10-11. Therefore, claims 19-20 are rejected for the same reasons set forth in the rejection of claims 10-11.

26. Regarding claim 29, Larsson discloses a method of receiving requests for a codestream for a JPEG 2000 image (Larsson, (00592, 1.1-12). And Guedàlia discloses a method of sending converted requested information using the Internet Imaging Protocol (IIP) (Guedalia, col. 5, 1.34-48). However both Larsson and Guedalia lack combination with JPEG DCT compression. Fukuhara discloses the converting requested information to JPEG DCT compression (Fukuhara, (0012)).

27. Claims 35, 36, and 38 are rejected under 35. U.S.C 103(a) as being unpatentable over Larsson in view of Josephsen, in view of Guedalia, and in view of Fukuhara as applied to claims above and further in view of Boliek et al., (U.S. Patent No. 6904178).

28. Regarding claims 35, 36, and 38, Larsson, Josephsen, Guedalia, and Fukuhara fail to teach a component, resolution, layer, precinct and tile parameter. However, Boliek discloses that In the JPEG 2000 standard, data in a compressed codestream can be stored in one of the five progression orders.

The progression order can change at different points in the codestream. The order is defined by embedded "for layers" on layers, precincts, resolution, and components. (Boliek, col.9, 1.25-29). Regarding claim 38, the one or more variables in the request syntax is well know in the UNIX system.

Because of the order has been defined as JPEG 2000 standard.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to decoding JPEG image by incorporating Larsson, Josephsen, Guedalia, and Fukuhara's codestream structure.

The motivation would be for combining Larsson and Josephsen to implement partial image retrieval in the compressed domain using Guedalia multi-resolution format for full resolution, while the background will have a reduced resolution which could improve in later stages (Larsson,[0070]), furthermore, to combine Fukuhara's converting requested information to JPEG DCT compression (Fukuhara, [0012]), and embedded "for layers" on layers, precincts, resolution, and components (Boliek, col.9, 1.25-29) will improve the Larsson's coding unit (CU) with the wavelet and bit plane for a region within a subband (Larsson, [0005]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 571-272-3898. The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2142

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KYL
1/3/06

A handwritten signature in black ink, appearing to read "Andrew Caldwell".

**ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER**